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Two new species of *Kylindria* from Fujian, China

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Abstract — Two new species of *Kylindria* were found during a survey of anamorphic fungi in tropical areas of Fujian province, China. The new species, *K. millettiae* and *K. embeliae*, occurred on the hosts *Millettia championii* and *Embelia rudis*, respectively. They are described, illustrated, and compared with closely related taxa. The type specimens are deposited in HSAUP (Herbarium of the Department of Plant Pathology, Shandong Agricultural University) and HMAS (Mycological Herbarium, Institute of Microbiology, Chinese Academy of Sciences).

Key words —hyphomycetes, taxonomy

Introduction

The genus *Kylindria* was erected by DiCosmo et al. (1983) based on *Cylindrotrichum triseptatum* Matsush. (Matsushima 1975). In a revision of the species of *Cylindrotrichum* Bonord. and *Chaetopsis* Grev., five species were assigned to the new genus *Kylindria*. The distinguishing characters of *Kylindria* were considered to be the macronematous, mononematous, dark, conidiophores, the monophialidic, narrow conidiogenous cells, and aseptate or one to several septate, smooth, hyaline conidia usually with an eccentric protruding basal hilum (DiCosmo et al. 1983, Castañeda 1988). These characters separate the genus from similar genera such as *Cylindrotrichum*, *Xenokylindria* DiCosmo et al., and *Chaetopsis* (DiCosmo et al. 1983).

Up to now, the genus *Kylindria* contains 13 species, and no species have been reported from China. In our studies on hyphomycetes from deciduous stems and rotten wood in south of China, two previously undescribed species of *Kylindria* were found. They are proposed herein as new.

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Taxonomy

Kylindria millettiae Y.D. Zhang & X.G. Zhang, **sp. nov.** Fig 1

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Coloniae effusae, brunneae, pilosae. Mycelium partim superficiale et partim immersum, ex hyphis ramosis, septatis, laevibus, pallide brunneis, 2.5–3 µm crassis compositum. Conidiophora macronematosa, mononematosa, nonramosa, erecta, recta vel flexuosa, laevia, atro-brunnea, apice versus pallidiora, 7–10-septata, 220–265 µm longa, 5.5–7.5 µm

Fig. 1. *Kylindria millettiae* A. Conidiophores with conidia. B. Conidia.

crassa. Cellulae conidiogenae monophialidica, cylindrica vel leviter subulata, integratae, terminales, dilute brunnea, 10.5–17 µm longa, 4.5–5.5 µm crassa, apicem versus deminutae. Conidia solitaria, cylindrica, hyalina, laevia, 3-septata, in massis mucosis translucentibus formata, apicem obtusa, 19.5–24 µm longa, 6.5–9 µm crassa.

Holotype: on dead branches of *Millettia championii* Benth. (*Leguminosae*), forest park of Wuyishan, Fujian Province, China, 16 Aug. 2009, Y.D. Zhang, HSAUP H3023 (isotype HMAS 146114).

Etymology: in reference to the host genus, *Millettia*.

Colonies effuse, brown, hairy. Mycelium partly superficial, partly immersed, composed of branched, septate, smooth-walled, pale brown hyphae, 2.5–3 µm thick. Conidiophores macronematous mononematous, unbranched, erect, straight or flexuous, smooth, dark brown, paler towards the apex, 7–10 septate, 220–265 µm long, 5.5–7.5 µm wide. Conidiogenous cells monophialidic, cylindrical or tapered, integrated, terminal, pale brown, 10.5–17 µm long, 4.5–5.5 µm wide, narrower at the apex. Conidia solitary, cylindrical, hyaline, smooth, 3-septate, accumulating in translucent slimy masses at the apices of conidiogenous cells, 19.5–24 µm long, 6.5–9 µm wide, obtuse at the apex, with an excentric, lateral, flat scar on the second cells from base.

The conidia of *K. millettiae* are morphologically similar to those of *K. excentrica* Bhat & B. Sutton (Bhat & Sutton 1985) in conidium morphology. However, the conidia of *K. millettiae* are smaller than those of *K. excentrica* (19.5–24 × 6.5–9 µm vs. 27.5–35 × 7.5–8.5 µm). In addition, most conidia of *K. millettiae* have an excentric lateral flat scar arising from the second cells close to base, whereas *K. excentrica* produces a lateral flat scar on the basal cells of the conidia.

Kylindria embeliae Y.D. Zhang & X.G. Zhang, **sp. nov.** Fig 2

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Coloniae effusae in substrato naturali, olivaceo-brunneae vel fuscae, pilosae. Mycelium partim superficiale et partim immersum, ex hyphis ramosis, septatis, pallide brunneis vel brunneis, laevibus, 1.5–2.5 µm crassis compositum. Conidiophora macronematosa, mononematosa, nonramosa, erecta, recta vel flexuosa, laevia, atro-brunnea, apice versus pallidiora, 5–7-septata, 130–150 µm longa, 5.5–6.5 µm crassa. Cellulae conidiogenae monophialidica, cylindrica, integratae, ad subapicem inflatae, 15–19.5 µm longa, 6.5–7.5 µm crassa, cum collaretto cupulato. Conidia solitaria, ellipsoidea vel cylindrica, hyalina, laevia, aseptata, 17.5–23 µm longa, 6–7.5 µm crassa, apice rotundata, ad basim truncata.

Holotype: on dead branches of *Embelia rudis* Hand.-Mazz. (*Myrsinaceae*), forest park of Wuyishan, Fujian Province, China, 15 Aug. 2009, Y.D. Zhang, HSAUP H3007 (isotype HMAS 146115).

Etymology: in reference to the host genus, *Embelia*.

Colonies effuse on the natural substratum, olivaceous brown to blackish brown, hairy. Mycelium partly superficial and partly immersed composed of branched, septate, pale brown to brown, smooth-walled hyphae, 1.5–2.5 µm thick.

Fig. 2. *Kylindria embeliae* A. Conidiophores with conidia. B. Conidia.

Conidiophores macronematous, mononematous, unbranched, erect, straight or flexuous, smooth, dark brown, paler towards the apex, 5–7-septate, 130–150 μm long, 5.5–6.5 μm wide. Conidiogenous cells monophialidic, cylindrical, integrated, swollen at the subapical region, 15–19.5 μm long, 6.5–7.5 μm wide, occasionally with a collarette at the apex. Conidia solitary, ellipsoidal or cylindrical, hyaline, smooth, aseptate, 17.5–23 μm long, 6–7.5 μm wide, apex rounded, base truncate.

Four other described species of *Kylindria* have aseptate conidia — *K. conglutinata* Matsush. (Matsushima 1993), *K. obesispora* R.F. Castañeda

(Castañeda 1988), *K. keitae* Rambelli & Onofri (Rambelli & Onofri 1987), *K. peruamazonensis* Matsush. (Matsushima 1993), and *K. zignoellae* (Höhn.) DiCosmo et al. (DiCosmo et al. 1983). The conidia of *K. embeliae* are larger than those of *K. keitae* (17.5–23 × 6–7.5 μm vs. 12.5–16.5 × 4.5–5.5 μm). In addition, the conidiogenous cells of *K. embeliae* become swollen at the subapical region and occasionally possess a collarette.

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Literature cited

Bhat DJ, Sutton BC. 1985. Some 'phialidic' hyphomycetes from Ethiopia. Transactions of the British Mycological Society 84: 723–730. doi:10.1016/S0007-1536(85)80130-3

Castañeda Ruíz RF. 1988. Fungi Cubenses III. Instituto de Investigaciones Fundamentales en Agricultura Tropical. Alejandro de Humboldt.

DiCosmo F, Berch SM, Kendrick B. 1983. *Cylindrotrichum*, *Chaetopsis*, and two new genera of hyphomycetes, *Kylindria* and *Xenokylindria*. Mycologia 75: 949–973. doi:10.2307/3792651

Matsushima T. 1975. Icones Fungorum a Matsushima Lectorum. Kobe, Japan: Published by author.

Matsushima T. 1993. Matsushima Mycological Memoirs No. 7. Kobe, Japan: Published by author.

Rambelli A, Onofri S. 1987. New species of *Kylindria* and *Xenokylindria* and notes on *Cylindrotrichum* (hyphomycetes). Transactions of the British Mycological Society 88: 393–397. doi:10.1016/S0007-1536(87)80012-8